B O C A G I A N A

Museu Municipal do Funchal

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ON A SMALL COLLECTION OF DECAPOD CRUSTACEANS FROM THE AZORES

By ARMANDO J. G. FIGUEIRA

Samples of Decapod Crustaceans have been sent to us on various occasions by some Azorean friends, to whom we wish to present our best thanks. Among the material 2 species new to the Azores have been found.

The bulk of these specimens were collected by Mr. B. L. Collins, but a number were sent by Colonel J. Agostinho, Dr. A. da Silveira Vicente and Mr. V. H. L. L. Forjaz.

In dealing with the various species a list of the previous records in the Azores is given. However, those in Nobre's paper of 1930 were not included, as the part on crustaceans in this last publication is merely a reprint of what was published by him in 1924.

Family RHYNCHOCINETIDAE

Rhynchocinetes rigens Gordon

Material seen:

2 ovigerous females, carapace length respectively 20.7 mm. and 20.9 mm. Horta Harbour, at night, end of August 1958. One of the specimens has an abnormal telson, with 2 lateral spines on the left side, and 3 on the right.

This species has apparently never been recorded from the Azores, although its occurrence there is not very surprising, taking into consideration its known geographical distribution (Madeira and Bermuda).

Family GNATHOPHYLLIDAE

Gnathophyllum elegans (Risso)

1888, *Gnathophyllum elegans* Barrois, p.29.

Material seen:

One female, carapace length 9mm. Rock-pools near Horta, September 1956.

One female, carapace length 8mm. Horta, without other data.

Previously recorded from the Azores by Barrois. The species is known from the western Mediterranean and the Adriatic, and it is also recorded from the Canary islands. In the collection of the Museu Municipal do Funchal there are also several specimens from Madeira.

Family PALAEMONIDAE

Palaemon (Palaeander) elegans Rathke

1861, *Palaemon serratus* Drouet [not seen, *fide* Barrois, 1888, pp. 4 & 28];
1888, *Palaemon squilla* Barrois, p.28;
1924, *Palaemon squilla* Nobre, p.87;
1955, *Palaemon (Palaeander) elegans* Chapman & Santler, p.373.

Material seen:

6 specimens, 3 males and 3 females, carapace length from 5.1 mm. to 9 mm. Rock-pools, Horta, Autumn of 1958?

This species has been known in the Azores for a long time. Barrois and Nobre, in their lists of Azorean crustaceans, mention it under the name of *Palaemon squilla*. For the taxonomy and characters of *P. elegans*, *P. squilla* auct. and *P. squilla* (L.), see the excellent paper by Holthuis (1950) on the Palaemoninae of the Siboga-Expedition.

Palaemon elegans has a wide geographical distribution. Apart from the Azores, the species is also recorded from Madeira, Canaries and Cape

Verde Islands, from the British Isles, and from SW Norway to SW Africa. It is also known in the Mediterranean and the Black Sea, and has been recorded from the Red Sea.

Pontonia pinnophylax (Otto)

1888, *Pontonia tyrrhena* Barrois, p. 29.

Material seen;

5 specimens, 2 males and 3 females (one of which with eyed eggs), carapace length from 6mm. to 11.8mm. Horta Harbour, Summer of 1958.

This species was recorded from the Azores by Barrois. It is also known in the Mediterranean and on the west coast of Africa (Gabon and Luanda). In the collection of the Museu Municipal do Funchal there are several specimens from Madeira.

Family PANDALIDAE

Parapandalus narval (Fabricius)

Material seen:

Five ovigerous females (one with eyed-eggs), carapace length from 10.1 mm. to 12.5 mm. Pico, depth about 10m., according to the collector, August 1959.

Taking into account the characters these specimens present (3rd maxillipeds with the penultimate segment longer than the ultimate, carpus of the 5th pereiopods shorter than the propodus, 6th abdominal segment nearly as long as the telson, shape of the dactylus of the posterior pereiopods, etc.) there is no doubt about their identity.

One of the specimens has the telson damaged. In 2 of the other the telson (including the distal spines) is as long as the 6th abdominal somite, measured dorsally; in the other two, it is a little shorter.

Only the largest specimen has the rostrum intact, armed with 69 spines above and with 45 below. In all specimens 4 of the spines of the dorsal margin of the rostrum are placed behind the posterior border of the orbit.

In the 4 specimens that have the telson intact, two have it armed

with 3 pairs of dorso-lateral spinules, and in the remaining two the telson bears 4 spinules on the right side and 3 on the left.

Parapandalus narval is known from the western Mediterranean and the Adriatic, and is also recorded from the Red Sea. In the Atlantic the species has been collected in the Canary Islands, off the Portuguese Guinea and off Angola (Portuguese West Africa). This is apparently the first record of P. *narval* from the Azores. In Madeira there is a small commercial fishery for the species.

Family SCYLLARIDAE

Scyllarus arctus (Linnaeus)

1861, *Scyllarus arctus* Drouet not seen, *fide* Barrois, 1888, p. 4*;
1888, *Scyllarus arctus* Barrois, p. 26;
1900, *Scyllarus arctus* Rathbun, p. 309 ref. to Azorean material in the Museum of Comparative Zoology*;
1917, *Scyllarus arctus* Bouvier, p. 106;
1924, *Scyllarus arctus* Nobre, p. 87;
1955, *Scyllarus arctus* Chapman & Santler, p. 373.

Material seen:

6 specimens, 2 males and 4 females, carapace length from 10.2 mm. to 26 mm. Horta, without other data. The smallest specimen is a male and the largest an ovigerous female, with eyed-eggs.

One ovigerous female, carapace length 22 mm. April 1959. Angra do Heroísmo.

The smaller of the two males here considered is quite abnormal. The left antenna is much shorter than the right one, and it has the penultimate segment of the peduncle with the outer border smooth and without teeth. Also the pleura of the right side of the 2nd and 3rd abdominal segments do not bear the characteristic tooth, that of the 3rd segment being rounded. The pleura of the other segments (except that of the left side of the 2nd segment, which is damaged) are normal.

Scyllarus arctus is found in the eastern Atlantic (from the south of England to the Gulf of Guinea) and in the Mediterranean. There are records of the species from the east and west coasts of America, and from the Indo-Pacific, but they need confirmation.

Family PAGURIDAE

Dardanus callidus (Risso)

1888, *Pagurus callidus* Barrois, p. 19;
1899, *Pagurus calidus* Milne-Edwards & Bouvier, p. 54;
1955, *Pagurus calidus* Chapman & Santler, p. 373.

Material seen:

3 specimens, 2 males and one female, length of the anterior portion of the carapace from 19.7 mm. to 24.5 mm. Horta, Spring of 1959.

Dardanus callidus is known from the eastern Atlantic (from Portugal to Cape Verde Islands) and from the Mediterranean. There is also a record from Ascension Island (Stebbing, 1914, p. 276).

Clibanarius erythropus (Latreille)

1888, *Clibanarius misanthropus* Barrois, p. 20;
1894, *Clibanarius misanthropus* Milne-Edwards & Bouvier, p. 77;
1922, *Clibanarius misanthropus* Bouvier, p. 15;
1924, *Clibanarius misanthropus* Nobre, p. 87;
1955, *Clibanarius misanthropus* Chapman & Santler, p. 373.

Material seen:

One male, length of the anterior portion of the carapace 4.5 mm. Horta Harbour, Summer of 1958. Very poor state of preservation.

We are tentatively identifying this rather damaged and discoloured specimen (it has lost both the chelipeds and part of the abdomen) as *C. erythropus*.

Clibanarius erythropus is known from the eastern Atlantic (from the French coast of Brittany to the Azores) and it is also recorded from the Salvage Islands. Furthermore it occurs in the Mediterranean and in the Black Sea.

Pagurus cuanensis Bell

1888, *Eupagurus cuanensis* Barrois, p. 19;
1955, *Eupagurus cuanensis* Chapman & Santler, p. 373.

Material seen:

One male, length of the anterior portion of the carapace 8.3 mm. Horta Harbour, Summer of 1958, in apparently quite shallow water.

The specimen lacks the first right pereiopod and part of the abdomen, but we have no doubt in referring it to the present species.

Pagurus cuanensis has been found in the eastern Atlantic (from Norway to Angola), in the Mediterranean and in South Africa.

Family GALATHEIDAE

Galathea strigosa (Linnaeus)

1888, *Galathea strigosa* Barrois, p. 21;
1924, *Galathea strigosa* Nobre, p. 87;

Material seen:

One female, carapace length 24.7 mm. Horta, without other data.

Galathea strigosa has been found in the eastern Atlantic (from the north of Norway to the Canary Islands,) and it also occurs in the Mediterranean. The species is also recorded from the Red Sea but its occurrence there needs confirmation.

Family ALBUNEIDAE

Albunea carabus (Linnaeus)

1888, *Albunea symnista* Barrois, p. 18.

Material seen:

One female, carapace length (including the small median spine) 16 mm. Paul da Praia, Terceira, April 1960.

As far as the author knows, the only previous record of the species in the Azores is that by Barrois. It is curious that, as late as 1888, the French author still considered *Albunea guerinii* (= *A. carabus*) to be identical with *A. symnista*.

Originally described from the Mediterranean, *A. carabus* was subsquently recorded from the west coast of Africa and from St. Helena. In the collection of the Museu Municipal do Funchal there are also several specimens from Madeira.

Family DROMIIDAE

Dromia personata (Linnaeus)

1888, *Dromia vulgaris* Barrois, p. 18;
1899, *Dromia vulgaris* Milne-Edwards & Bouvier, p. 15;
1924, *Dromia vulgaris* Nobre, p. 87;
1955, *Dromia vulgaris* Chapman & Santler, p. 374.

Material seen:

3 specimens, 2 males and one female, carapace length from 57.5 mm. to 61.5 mm., the largest specimen being a male. Horta, Summer of 1958?

This species is generally named *Dromia vulgaris* H. Milne-Edwards, 1837, or *Dromia caputmortuum* (Linnaeus, 1767), but Holthuis & Gottlieb, 1958, p. 78, called attention to the fact that the name *Dromia personata* must be given to the species, because Linnaeus's description of *Cancer personatus* in 1758 was based on material of the present species.

Dromia personata has been found in the eastern Atlantic (from the south coast of England to the Gold Coast) and in the whole Mediterranean.

Family HOMOLIDAE

Homola barbata (Fabricius)

1894, *Homola spinifrons* Milne-Edwards & Bouvier, p. 61;
1899, *Homola barbata* Milne-Edwards & Bouvier, p. 11.

Material seen:

One female, carapace length 17 mm. Horta, May 1959, in deep water.

Apart from the Azores, *Homola barbata* is also recorded from Madeira and Cape Verde Islands. Furthermore in the eastern Atlantic the species is also recorded from the coast of Portugal to the coast of the Sahara. In the western Atlantic *H. barbata* is recorded from off southeastern Massachusetts to the Caribbean Sea. The species also occurs in the Mediterranean and South Africa.

Family CALAPPIDAE

Calappa granulata (Linnaeus)

1886, *Calappa granulata* Miers [not seen, *fide* Milne-Edwards & Bouvier, 1900, p.60].
1888, *Calappa granulata* Barrois, p. 17;
1899, *Calappa granulata* Milne-Edwards & Bouvier, p. 22;
1922, *Calappa granulata* Bouvier, p. 57;
1955, *Calappa granulata* Chapman & Santler, p. 374.

Material seen:

One male, carapace length 46.5 mm. Faial, Summer of 1959?

Calappa granulata, apart from the Mediterranean, is also known from the eastern Atlantic (from Portugal to the Cape Verde Islands). The occurrence of the species in the Cape Verde Islands needs, however, to be confirmed.

Family CANCERIDAE

Cancer bellianus Johnson

1888, *Cancer Bellianus* Barrois, p. 10;
1894, *Cancer bellianus* Milne-Edwards & Bouvier, p. 36.

Material seen:

One female, carapace length 111mm. Horta, Spring of 1959?, in rather deep water.

Cancer bellianus, apart from the Azores, is known from Madeira, the Canary Islands, Portugal and the Bay of Biscay (Concarneau).

Family PORTUNIDAE

Portunus hastatus (Linnaeus)

1888, *Lupa hastata* Barrois, p.14;
1914, *Neptunus (Amphitrite) hastatus* Lenz & Strunck, p.278;
1955, *Neptunus hastatus* Chapman & Santler, p.374.

Material seen:

One male, carapace length 24mm. Pico, August 1959, in a depth of about 10m.

Portunus hastatus is recorded from the Mediterranean and from the eastern Atlantic (Azores and Madeira to Angola).

Family XANTHIDAE

Pseudozius bouvieri (A. Milne-Edwards)

1888, *Ozius Edwardsi* Barrois, p.10.
1900, *Pseudozius Bouvieri* Milne-Edwards & Bouvier, p.82.

Material seen:

2 females, carapace length respectively 18.5mm. and 28mm. Found dead lying on the beach, near the volcano of Capelinhos, end of November 1958.

This fine crab was first recorded from the Azores in 1888 by Barrois who, supposing it to be a new species, described it under the name of *Ozius Edwardsi* and gave a coloured figure of the animal.

Apart from the Azores, *Pseudozius bouvieri* is recorded from Madeira, Canary Islands, Cape Verde Islands, Annobon, Rolas (S. Tomé), Ascension and St. Helena; there is also a record from the coast of Africa (9° 20' S. 13° 04' E), west of the River Quanza, Angola.

Eriphia verrucosa (Forskal)

1888, *Eriphia spinifrons* Barrois, p.12;
1899, *Eriphia spinifrons* Milne-Edwards & Bouvier, p.33;
1924, *Eriphia spinifrons* Nobre, p.87;
1955, *Eriphia spinifrons* Chapman & Santler, p.374.

Material seen:

One male, carapace length 26mm. Rock-pool, Faial, September 1959.

In 1958 Holthuis & Gottlieb (p.98) pointed out that, due to the law of priority, the name *Eriphia verrucosa* must be used for the present species, instead of *Eriphia spinifrons*, by which it is generally known.

Eriphia verrucosa has been recorded from the Mediterranean and the Black Sea and from the eastern Atlantic (from the south coast of Brittany to Mauritania).

Xantho incisus (Leach)

1888, *Xantho floridus* Barrois, p.10;
1894, *Xantho floridus* Milne-Edwards & Bouvier, p.33;
1924, *Xantho floridus* Nobre, p.87;
1955, *Xantho floridus* Chapman & Santler, p.374.

Material seen:

2 males, carapace length respectively 12mm. and 19mm. Found dead lying on the beach, near the volcano of Capelinhos, end of November, 1958.

Apart from the Azores, in the eastern Atlantic *Xantho incisus* is recorded from Madeira, Canaries and Cape Verde Islands, from the Isle of Man and from the south coasts of Ireland and England to Mauritania. There are records from the islands of S. Tomé and Principe. In the Mediterranean the ssp. *granulicarpus* Forest occurs.

Family GRAPSIDAE

Pachygrapsus maurus (Lucas)

1900, *Pachygrapsus maurus* Rathbun, p.279 (ref. to an Azorean specimen in the U. S. National Museum;
1918, *Pachygrapsus maurus* Rathbun, p. 244 (ref. to a female from the Azores, apparently the specimen mentioned in 1900;
1955, *Pachygrapsus maurus* Chapman & Santler, p.375.

Material seen:

One female, carapace length 12mm. Horta, Spring of 1958?

Apart from the Azores, *P. maurus* also occurs in Madeira and the Canary Islands, in Algeria and on the Mediterranean coasts of Morocco and Spain. The species is also said to have been collected in Rio de Janeiro, Brazil, but its presence there needs confirmation.

Planes minutus (Linnaeus)

1861, *Nautilograpsus minutus* Drouet (not seen, *fide* Barrois, 1888, p. 4);
1951, *Planes minutus* Chace, p. 81 (list of the Azorean records of *P. minutus* prior to 1951, except that by Drouet, 1861);
1955, *Planes minutus* Chapman & Santler, p. 375;
1950, *Planes minutus* Sivertsen & Holthuis, p. 50.

Material seen:

2 females, carapace length respectively 12 mm. and 16 mm. Horta, Summer of 1958.

Planes minutus is known, with certainty, only from the tropical and sub-tropical Atlantic, and from the Mediterranean. The species is also recorded from the Indian and Pacific oceans, but its presence there needs confirmation.

Plagusia depressa (Fabricius)

1914, *Plagusia depressa* Lenz & Strunck, p. 285;
1918, *Plagusia depressa* Rathbun, p. 332 [334] [ref. to Azorean material].

Material seen:

Two ovigerous females, carapace length respectively 54.5 mm. and 59.5 mm. Faial. Summer of 1959.

This species has a wide geographical distribution. The typical *P. depressa* lives in the Atlantic, and at least one different form occurs in the Indo-Pacific. *P. depressa* is sometimes found in the Mediterranean where, according to Bouvier, 1940, p. 299, it is introduced by clinging to the hull of ships.

Percnon gibbesi (H. Milne-Edwards)

1838, *Acanthopus planissimus* Barrois, p. 16;
1918, *Percnon gibbesi* Rathbun, p. 337 [339] [ref. to Azorean material];
1924, *Acanthopus planissimus* Nobre, p. 80;
1955, *Percnon gibbesi* Chapman & Santler, p. 375.

Material seen:

One male, carapace length 24.5mm. Ponta Delgada, no other data. Dry.

It is possible, as has been suggested by some workers, that *Percnon gibbesi* is a synonym of *P. planissimum* (Herbst). However, until the question is finally settled, we decided to name the specimen here considered (in which the pilose groove on the upper margin of the chela is a little more than 1/4 the length of the upper margin of the palm) *P. gibbesi*.

Percnon gibbesi has been recorded from both sides of the Atlantic and from the eastern Pacific (west coast of the American Continent, Clarion Island and Galapagos Islands).

Family MAJIDAE

Maja squinado (Herbst)

1955, *Maia squinado* Chapman & Santler, p. 375.

Material seen:

One female, carapace length (including the rostrum) about 58 mm. Horta, Summer of 1958.

In the eastern Atlantic *Maja squinado* is known from the British Isles to Guinea. It also occurs in the Mediterranean.

Pisa gibbsi Leach

1899, *Pisa armata* Milne-Edwards & Bouvier, p. 42.

Material seen:

One ovigerous female, carapace length (including the rostrum) 35.5mm. Horta, Summer of 1958.

There is no doubt about the identity of the present specimen, as the fur covering the intestinal tubercle was removed.

Pisa gibbsi is mentioned in the eastern Atlantic (from the English Channel to Angola) and in the Mediterranean.

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